Original Research Article

A Comparative Study of Non Descent Vaginal Hysterectomy with Abdominal Hysterectomy in relation with Morbidity and Outcome in Dysfunctional Uterine Bleeding Patients

Rathindra Nath Ray1*, Samir Roy2, Shovondeb Kalapahar3, Chiranjit Ghosh4 and Prosenjit Das5

1R.M.O.cum Clinical tutor, Dept. of G & O, Calcutta National Medical College & Hospital, Kolkata, India
2Resistar, The Mission Hospital, Durgapur, India
3Senior Resident, IIMSR & Dr. BCRHH, Haldia, India
4R.M.O. cum Clinical tutor, R.G.Kar Medical College & Hospital, India
5MS P.G.T (G & O), CNMC & H, India
*Corresponding author

ABSTRACT

Hysterectomy is the most common operation performed by the Gynaecologists, next only to caesarean section. The past few years have seen growing indications for vaginal hysterectomy which is now preferred over abdominal hysterectomy. A prospective observational study was conducted over a sample size of 100 patients who underwent hysterectomy with the following aims and objectives: (1) To assess morbidity, management & technical problems encountered in Non descent vaginal hysterectomy. (2) To compare the above variables in abdominal hysterectomy group. (3) To assess the factors modifying outcome of the surgery. For the statistical analysis of the study Chi-square test and ‘t’ test were applied. There were no significant differences in the duration of surgery, intra operative injuries and postoperative bleeding needing laparotomy between the two groups. Statistically significant decrease in blood loss during surgery, postoperative pain, wound infection, febrile morbidity, and length of hospital stay, post operative blood transfusion and post-operative recovery occurred in the NDVH group when compared with the TAH group. NDVH is associated with less blood loss during surgery & decreased postoperative morbidity when compared to TAH; length of hospital stay is significantly less for NDVH when compared to TAH. No significant difference in the duration of surgery and other intra-operative complications between the two groups. Thus it can be concluded that NDVH is feasible, safe and provide more patient comfort without increasing the duration of surgery, blood loss and other intra-operative complications.

Keywords
Non descent vaginal hysterectomy (NDVS), Total abdominal hysterectomy (TAH), Dysfunctional uterine bleeding (DUB)
Introduction

Hysterectomy is the most common operation performed by the Gynaecologists, next only to caesarean section.

The past few years have seen growing indications for vaginal hysterectomy which is now preferred over abdominal hysterectomy.

“REDISCOVERY” of the vaginal route, the term rediscovery is justified by the fact that vaginal hysterectomy is a technique that had already been introduced & performed centuries ago, but with little success among gynaecologists.

Probably because of the inexperience or lack of enthusiasm among gynaecologists, who performed the abdominal route, believing it to be a safer & easier procedure? In the recent decade increased expertise has been achieved by the gynaecologists & better compliance has been reported by patients.

This has led to the increased number of vaginal hysterectomies compared to abdominal hysterectomies. In most instances a route is chosen because this has become a routine procedure in that particular institution or clinic.

In 1990, the ACOG established some guidelines for the route of hysterectomy stating that vaginal hysterectomy is performed in women with mobile uteri, no larger than one at 12 weeks gestation; Kumar & Antony concluded that vaginal hysterectomy is a safe procedure for benign non prolapsed uterus of less than 12 weeks size. In recent period vaginal hysterectomy can be done with newer indication with equal safety and lesser morbidity.

So our study was conducted to compare regarding duration of surgery, blood loss, post operative recovery with early ambulation of the patient, operative complications & their management, duration of hospital stay and to compare the outcome regarding the above mention parameters.

The present study is to show that vaginal hysterectomy involves less morbidity, is less invasive, decreases duration of hospitalization & recovery time, reduces medical costs when compared to total abdominal hysterectomy.

Materials and Method

The study was a prospective, observational; study conducted in the Calcutta National Medical College and Hospital during the period November 2011 to October 2012.

One hundred patients requiring hysterectomy for gynaecological disorders without prolapse were included in the study. Of the 100 patients, fifty patients who underwent hysterectomy by vaginal route were taken as study group A, and the remaining 50 patients who underwent by the abdominal route were taken as study group B. The standard NDVH and TAH were performed and following parameters were compared.

Intra-operative blood loss, by weighing swabs in their dry state; time taken for surgery; intra-operative injury; postoperative bleeding needing laparotomy; postoperative blood transfusion, post-operative vaginal discharge if any noted; fever during the postoperative period; pain perception on day 3; wound infection; any other infection; duration of hospital stay and follow up complains (Table 1).
Result and Analysis

Comparison of Various factors

a) Time taken for surgery:
Mean duration of surgery in NDVH: 66.32 Min
Mean duration of surgery in TAH: 72.88 Min
t value: 1.45
p value: 0.10

The difference in time noted was not statistically significant

b) Blood loss during surgery:
Mean blood loss in NDVH: 127.64 ml
Mean blood loss in TAH: 216.16 ml
t value: 11.46
p value: 0.0001

The blood losses between the two groups were compared and the P value obtained in 0.0001 which was statistically significant. More blood loss was observed in TAH group.

c) Pain scoring on postoperative day-3 in the VAS:
Mean pain score in NDVH: 2.88
Mean pain score in TAH: 6.48
t value: 19
p value: 0.0001

The difference in the pain rating score between the two groups was found to be statistically significant with a P value<0.05. Postoperative mobilization was earlier in NDVH patients.

d) Hospital stay:
Mean duration of hospital stay in NDVH: 7.90 days
Mean duration of hospital stay in TAH: 9.92 days
t value: 0.461
p value: 0.0001

The difference in the duration of hospital stay when the two groups were compared was found to be statistically significant with a p value 0.0001.

8 cases (16%) in NDVH group and 17 cases (34%) in TAH group needed postoperative blood transfusion. p value obtained following comparing the two groups was 0.0377, which was statistically significant. Post operative blood transfusion was required more in TAH group than in NDVH group.

No incidence of wound infection in NDVH group. 8 patients (16%) in TAH group had wound indurations and 3 patients (6%) had frank infection of abdominal wound. The two groups were compared and the p value obtained was 0.002, which was statistically significant (Table 2).

Six cases (12%) in NDVH group and 14 cases (28%) in TAH group had fever>38°C postoperatively. When the febrile morbidity was compared between the two groups, p value obtained was 0.0455, which was statistically significant. Fever occurred more frequently in TAH than in NDVH group (Table 3).

Six cases (12%) in NDVH group and 7 cases (14%) in TAH group had urinary tract infection. Respiratory infection occurred in 3 cases (6%) in NDVH group and 8 cases (16%) in TAH group 3 case (2%) of gastroenteritis in NDVH and 2 cases (4%) in TAH group. There were 5 cases (4%) of paralytic ileus in TAH but no cases in NDVH group. When the two groups were compared, p value obtained was 0.595.
which was not statistically significant (Table 4).

Patients undergoing hysterectomy were followed up in the OPD of G&O to note the following parameters.

Vaginal discharge was noted in 21 cases in NDVH and 15 cases in TAH group, p value obtained is 0.296 and it is not statistically significant (Table 5).

Time taken for full recovery of the patients was 23.5 days in case of NDVH and 36.5 days in TAH group, p value obtained is 0.001 which is statically significant.

Post operative pain and other complaint was present in 15 patients in NDVH group and 26 patients in TAH group, p value obtained was 0.025 which is statistically significant.

From the present study, it can be concluded that:

NDVH is associated with less blood loss during surgery & decreased postoperative morbidity when compared to TAH. Length of hospital stay is significantly less for NDVH when compared to TAH. No significant difference in the duration of surgery and other intra-operative complications between the two groups. Post operative recovery is faster in NDVH group in comparison to TAH group. Intra operative complication is not significantly in cases of NDVH. Duration of surgery is less or similar in NDVH group in comparison to TAH group.

Thus it can be concluded that NDVH is feasible, safe and provide more patient comfort without increasing the duration of surgery, blood loss and other intra-operative complications.

**Table 1** Post-operative blood transfusion & type of surgery

<table>
<thead>
<tr>
<th>No. Of cases</th>
<th>Chi-square value</th>
<th>Df</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given</td>
<td>Not given</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDVH 8(16)</td>
<td>42(84)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAH 17(34)</td>
<td>33(66)</td>
<td>4.320</td>
<td>1</td>
</tr>
<tr>
<td>TAH 17(34%)</td>
<td>33(66%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2** Wound infection in relation to type of surgery

<table>
<thead>
<tr>
<th>Type of Surgery</th>
<th>No: of cases</th>
<th>Chi- square value</th>
<th>Df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without infection</td>
<td>With indurations</td>
<td>With Frank infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDVH 50 (100%)</td>
<td>0</td>
<td>0</td>
<td>12.36</td>
<td>2</td>
</tr>
<tr>
<td>TAH 39 (78%)</td>
<td>8(16%)</td>
<td>3(6%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3: Febrile morbidity in relation to type of surgery

<table>
<thead>
<tr>
<th>Type of Surgery</th>
<th>No. Of cases</th>
<th>Chi-square value</th>
<th>Df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Given</td>
<td>Not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDVH</td>
<td>8(16)</td>
<td>42(84)</td>
<td>4.320</td>
<td>1</td>
</tr>
<tr>
<td>TAH</td>
<td>17(34)</td>
<td>33(66)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAH</td>
<td>17(34)</td>
<td>33(66)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: Other infections in relation with type of surgery

<table>
<thead>
<tr>
<th>Types of surgery</th>
<th>No. of cases</th>
<th>Chi-square</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without any other infection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With UTI</td>
<td>With respiratory infection</td>
<td>With paralytic ileus</td>
<td>With gastro enteritis</td>
<td></td>
</tr>
<tr>
<td>NDVH</td>
<td>38(76%)</td>
<td>6(12%)</td>
<td>3(6%)</td>
<td>0</td>
</tr>
<tr>
<td>TAH</td>
<td>28(56%)</td>
<td>7(14%)</td>
<td>8(16%)</td>
<td>5(10%)</td>
</tr>
</tbody>
</table>

### Table 5: Delayed complications in different types of surgery

<table>
<thead>
<tr>
<th></th>
<th>NDVH</th>
<th>df</th>
<th>TAH</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal Discharge</td>
<td>21</td>
<td>1</td>
<td>15</td>
<td>0.296</td>
</tr>
<tr>
<td>Time to full recovery(days)</td>
<td>23.5 (3.57)</td>
<td>98</td>
<td>36.5</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>T=19.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-op pain</td>
<td>15</td>
<td>1</td>
<td>26</td>
<td>0.025</td>
</tr>
</tbody>
</table>
Fig. 1  Comparison of various factors

<table>
<thead>
<tr>
<th></th>
<th>ndvh</th>
<th>tah</th>
</tr>
</thead>
<tbody>
<tr>
<td>time</td>
<td>66.32</td>
<td>72.88</td>
</tr>
<tr>
<td>bl.loss</td>
<td>127.64</td>
<td>216.16</td>
</tr>
<tr>
<td>pain</td>
<td>2.88</td>
<td>6.48</td>
</tr>
<tr>
<td>hosp.stay</td>
<td>7.9</td>
<td>9.92</td>
</tr>
</tbody>
</table>

Fig. 2  Febrile Morbidity

- Fever
  - Ndvh
  - Tah

- Afebrile
  - Ndvh
  - Tah

Fig. 3  OTHER

- Without any inf.
- With Uti
- With rti
- Paralytic ileus
- Gastroenteritis

[Graphs and data showing comparisons and distributions]
References


Te LINDE operative Gynaecology, 10th edn., Pp. 82–99.